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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,664	03/29/2004	John Glenn Thompson	SJO920030102US1	2441

45216 7590 03/30/2007  
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EXAMINER

BONURA, TIMOTHY M

ART UNIT	PAPER NUMBER
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2114

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/30/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/811,664	<b>Applicant(s)</b> THOMPSON, JOHN GLENN	
	<b>Examiner</b> Tim Bonura	<b>Art Unit</b> 2114	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2007.
- 2a) ☒ This action is FINAL.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,5-8,11-14,17-22 and 25-30 is/are rejected.
- 7) ☒ Claim(s) 2-4,9,10,15,16,23 and 24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

- **Claims 1, 5-8, 11-14, 17-22, and 25-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Bartfai, et al, U.S. Patent Application Publication Number 2005/0081091.**

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 5-8, 11-14, 17-22, and 25-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Bartfai, et al, U.S. Patent Application Publication Number 2005/0081091.
4. The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.
5. Regarding claim 1:

- a. Regarding the limitation of "a mirror module configured to suspend mirroring operations between a primary volume and a secondary volume, each volume comprising a suspend-time volume identifier within a volume identifier field," Bartfai discloses a system with a first and second mirrored volumes and upon detection of a error at the first storage unit, the second unit becoming the primary unit for receiving data. (Paragraph 0013).
- b. Regarding the limitation of "a volume identification module configured to associate the secondary volume with a selected volume identifier," Bartfai discloses a system that can direct data updates to the secondary unit upon detection of the first. (Paragraph 0013).
- c. Regarding the limitation of "a data replication module configured to copy a volume to a backup volume," Bartfai discloses a system wherein a third unit receives asynchronous updates from the second unit. (Paragraph 0013).
- d. Regarding the limitation of "the volume identification module further configured to associate the suspend-time secondary volume identifier with a backup volume," Bartfai discloses a system with the third unit is asynchronously updated with the second unit after a failure of the first unit. (Paragraph 0013).
6. Regarding claim 5, Bartfai disclose a system wherein, upon the first unit being repaired, the first unit re-establishes mirror with the second unit. (Paragraph 0013).
7. Regarding claim 6, Bartfai disclose a system wherein, upon the first unit being repaired, the first unit re-establishes mirror with the second unit. (Paragraph 0013).
8. Regarding claim 7, Bartfai discloses a system with a storage control unit that is coupled to all the storage units for communication. The storage control would inherently contain a storage unit identifier in order to communicate with the storage units. (Paragraph 0029).

9. Regarding claim 8:

e. Regarding the limitation of "a host configured to read and write data," Bartfai discloses a system with a first and second mirrored volumes. (Paragraph 0013).

f. Regarding the limitation of "a primary storage system in communication with the host, the primary storage system having a primary volume," Bartfai disclose a system wherein data from the system is written to the first storage unit. (Paragraph 0044).

g. Regarding the limitation of "a secondary storage system configured to mirror data on the primary storage system using a secondary volume, the secondary volume having a suspend-time volume identifier within a volume identifier field," Bartfai discloses a system with a first and second mirrored volumes and upon detection of a error at the first storage unit, the second unit becoming the primary unit for receiving data. (Paragraph 0013).

h. Regarding the limitation of "a backup system configured to replicate an online volume to a backup volume," Bartfai discloses a system wherein a third unit receives asynchronous updates from the second unit. (Paragraph 0013).

i. Regarding the limitation of "a secondary volume replication module configured to suspend a mirroring operating, associate the secondary volume with a selected identifier, copy the secondary volume to the backup volume, and associate the suspend-time secondary volume identifier with a backup volume," Bartfai discloses a system with the third unit is asynchronously updated with the second unit after a failure of the first unit. (Paragraph 0013).

10. Regarding claim 11, Bartfai discloses a system in which the second unit can become the primary source for storing data when the first unit fails. (Paragraph 0045-0046).

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11. Regarding claim 12, Bartfai disclose a system wherein, upon the first unit being repaired, the first unit re-establishes mirror with the second unit. (Paragraph 0013).
12. Regarding claim 13, Bartfai disclose a system wherein, upon the first unit being repaired, the first unit re-establishes mirror with the second unit. (Paragraph 0013).
13. Regarding claim 14:
  - j. Regarding the limitation of "suspend mirroring operations between a primary volume and a secondary volume, each volume comprising a suspend-time volume identifier within a volume identifier field," Bartfai discloses a system with a first and second mirrored volumes and upon detection of an error at the first storage unit, the second unit becoming the primary unit for receiving data. (Paragraph 0013).
  - k. Regarding the limitation of "associate the secondary volume with a selected volume identifier," Bartfai discloses a system that can direct data updates to the secondary unit upon detection of the first. (Paragraph 0013).
  - l. Regarding the limitation of "replicating the secondary volume with a selected volume identifier," Bartfai discloses a system wherein a third unit receives asynchronous updates from the second unit. (Paragraph 0013).
  - m. Regarding the limitation of "associating the suspend-time secondary volume identifier with a backup volume," Bartfai discloses a system with the third unit is asynchronously updated with the second unit after a failure of the first unit. (Paragraph 0013).
14. Regarding claim 17, Bartfai disclose a system wherein, upon the first unit being repaired, the first unit re-establishes mirror with the second unit. (Paragraph 0013).
15. Regarding claim 18, Bartfai disclose a system wherein, upon the first unit being repaired, the first unit re-establishes mirror with the second unit. (Paragraph 0013).

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16. Regarding claim 19, Bartfai discloses a system with a storage control unit that is coupled to all the storage units for communication. The storage control would inherently contain a storage unit identifier in order to communicate with the storage units. (Paragraph 0029).

17. Regarding claim 20, Bartfai disclose a system wherein, upon the first unit being repaired, the first unit re-establishes mirror with the second unit. (Paragraph 0013). Bartfai discloses a system with a storage control unit that is coupled to all the storage units for communication. The storage control would inherently contain a storage unit identifier in order to communicate with the storage units. (Paragraph 0029). Bartfai discloses a system wherein the host determines the first unit is about to fail and proceeds with failing over to the second unit. (Paragraph 0045,0046).

18. Regarding claim 21, Bartfai discloses a system that can direct data updates to the secondary unit upon detection of the first. (Paragraph 0013).

19. Regarding claim 22:

n. Regarding the limitation of "suspend mirroring operations between a primary volume and a secondary volume, each volume comprising a suspend-time volume identifier within a volume identifier field," Bartfai discloses a system with a first and second mirrored volumes and upon detection of an error at the first storage unit, the second unit becoming the primary unit for receiving data. (Paragraph 0013).

o. Regarding the limitation of "associate the secondary volume with a selected volume identifier," Bartfai discloses a system that can direct data updates to the secondary unit upon detection of the first. (Paragraph 0013).

p. Regarding the limitation of "replicating the secondary volume with a selected volume identifier," Bartfai discloses a system wherein a third unit receives asynchronous updates from the second unit. (Paragraph 0013).

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- q. Regarding the limitation of "associating the suspend-time secondary volume identifier with a backup volume," Bartfai discloses a system with the third unit is asynchronously updated with the second unit after a failure of the first unit. (Paragraph 0013).
20. Regarding claim 25, Bartfai disclose a system wherein, upon the first unit being repaired, the first unit re-establishes mirror with the second unit. (Paragraph 0013).
21. Regarding claim 26, Bartfai disclose a system wherein, upon the first unit being repaired, the first unit re-establishes mirror with the second unit. (Paragraph 0013).
22. Regarding claim 27, Bartfai discloses a system with a storage control unit that is coupled to all the storage units for communication. The storage control would inherently contain a storage unit identifier in order to communicate with the storage units. (Paragraph 0029).
23. Regarding claim 28, Bartfai disclose a system wherein, upon the first unit being repaired, the first unit re-establishes mirror with the second unit. (Paragraph 0013). Bartfai discloses a system with a storage control unit that is coupled to all the storage units for communication. The storage control would inherently contain a storage unit identifier in order to communicate with the storage units. (Paragraph 0029). Bartfai discloses a system wherein the host determines the first unit is about to fail and proceeds with failing over to the second unit. (Paragraph 0045,0046).
24. Regarding claim 29, Bartfai discloses a system that can direct data updates to the secondary unit upon detection of the first. (Paragraph 0013).
25. Regarding claim 30:
- r. Regarding the limitation of "suspend mirroring operations between a primary volume and a secondary volume, each volume comprising a suspend-time volume identifier within a volume identifier field," Bartfai discloses a system with a first and



second mirrored volumes and upon detection of an error at the first storage unit, the second unit becoming the primary unit for receiving data. (Paragraph 0013).

s. Regarding the limitation of "associate the secondary volume with a selected volume identifier," Bartfai discloses a system that can direct data updates to the secondary unit upon detection of the first. (Paragraph 0013).

t. Regarding the limitation of "replicating the secondary volume with a selected volume identifier," Bartfai discloses a system wherein a third unit receives asynchronous updates from the second unit. (Paragraph 0013).

26. Regarding the limitation of "associating the suspend-time secondary volume identifier with a backup volume," Bartfai discloses a system with the third unit is asynchronously updated with the second unit after a failure of the first unit. (Paragraph 0013).

### ***Specification***

27. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### ***Allowable Subject Matter***

28. Claims 2-4, 9, 10, 15-16, and 23-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Response to Arguments***

29. Applicant's arguments filed 02/05/2007 have been fully considered but they are not persuasive.

30. On page 9 of the response the applicant states that the examiner found no specification objections. The title was objected to in the original non-final rejection (09/27/2006). Please note the objection.

***Response to Amendment***

31. The affidavit (CFR 1.131 filed on 02/05/2007 under 37 CFR 1.131 has been considered but is ineffective to overcome the rejection of the Bartfai reference.

32. Any document to be filed in the Patent and Trademark Office and which is required by any law, rule, or other regulation to be under oath may be subscribed to by a written declaration. Such declaration may be used in lieu of the oath otherwise required, if, and only if, the declarant is on the same document, warned that willful false statements and the like are punishable by fine or imprisonment, or both (18 U.S.C. 1001) and may jeopardize the validity of the application or any patent issuing thereon. The declarant must set forth in the body of the declaration that all statements made of the declarant's own knowledge are true and that all statements made on information and belief are believed to be true.

33. The evidence submitted is insufficient to establish a conception of the invention prior to the effective date of the Bartfai reference. While conception is the mental part of the inventive act, it must be capable of proof, such as by demonstrative evidence or by a complete disclosure to another. Conception is more than a vague idea of how to solve a problem. The requisite means themselves and their interaction must also be comprehended. See *Mergenthaler v. Scudder*, 1897 C.D. 724, 81 O.G. 1417 (D.C. Cir. 1897). The applicant states only a vague idea of how to solve the problem. There is no concrete idea with which to suggest the conception was made as of 9/24/2003 (see Affidavit exhibit D page 10).

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34. The evidence submitted is insufficient to establish a reduction to practice of the invention in this country or a NAFTA or WTO member country prior to the effective date of the Bartfai reference. The applicant fails to establish a date for reduction of practice. In the affidavit (see Affidavit exhibit D page 3 question 2) the applicant responds to the question of "Have you implemented the invention or otherwise shown that it is workable?" The examiner views this question as the bar for a reduction of practice. The applicant responded in the negative to the question, therefore, no reduction of practice has been set as of 9/24/2003.

35. For the sake of argument, although not stated, the examiner will now assume that the conception date of 9/24/2003 or before has been established. The examiner will also assume the constructive reduction of practice has been met by 03/29/2004. The evidence submitted is insufficient to establish diligence from a date prior to the date of reduction to practice of the Bartfai reference to either a constructive reduction to practice or an actual reduction to practice. The examiner contends that the following timeline does not consist of diligence on behalf of the applicant between 9/24/2003 and the application filing date of 3/29/2004:

- 9/24/2003 – Claimed Reduction of Practice – Assumed conception date
- 10/17/2003 – Claimed "Main Idea" document is provided to patent review committee (Exhibit B).
- 11/21/2003 – Claimed Patent Search performed (Exhibit A).
- 12/05/2003 – Claimed received of memo describing invention to patent review committee (Exhibit B).
- Sometime in January, 2004 – Claimed outside counsel takes a disclosure for the application
- Sometime in March, 2004 – Claimed revision of outside counsel draft
- 3/22/2004 – Submitted final draft to in-house IBM attorney for final review

- 3/29/2004 – Filed application

The examiner contends that there are at least 3 gaps in the diligence of over a month. MPEP section 715.0(a) establishes that diligence “it is not enough merely to allege that applicant or patent owner had been diligent” and “when he or she is doing nothing, if his or her lack of activity is excused. Note, however, that the record must set forth an explanation or excuse for the inactivity...” The examiner contends that the applicant does not explain any of the periods of inactivity between any and all of the bulleted items above. Each of which cause a lack of diligence in the terms of MPEP 715.07(a).

### ***Conclusion***

36. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

37. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Tim Bonura**.

- The examiner can normally be reached on **Mon-Fri: 8:30-5:00**.
- The examiner can be reached at: **571-272-3654**.

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38. If attempts to reach the examiner by telephone are unsuccessful, please contact the examiner's supervisor, **Scott Baderman**.

- The supervisor can be reached on **571-272-3644**.

39. The fax phone numbers for the organization where this application or proceeding is assigned are:

- **703-872-9306 for all patent related correspondence by FAX.**

40. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov/>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

41. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **receptionist** whose telephone number is: **571-272-2100**.

42. Responses should be mailed to:

- **Commissioner of Patents and Trademarks**

**P.O. Box 1450**

**Alexandria, VA 22313-1450**

tmb  
March 27, 2007

  
**SCOTT BADERMAN**  
**SUPERVISORY PATENT EXAMINER**